



EEAC Consultant Review of Initial Draft Plans for 2013-2015

EEAC Consulting Team
May 8, 2012





Benefits are Impressive

\$8.6 billion in proposed benefits is impressive
(proposed from 2013-2015 EE programs)

Energy Efficiency Program Benefits (millions)				
	2013	2014	2015	Total
Electric Benefits	\$ 2,447	\$ 2,489	\$ 2,529	\$ 7,465
Gas Benefits	\$ 364	\$ 375	\$ 384	\$ 1,123
Total Benefits	\$ 2,810	\$ 2,864	\$ 2,914	\$ 8,588

In comparison, the 2010-2012 programs are expected to provide \$6 billion in benefits

Positives: C&I Programs

- Clear commitment in the plan to continue and expand the upstream model. Specifically, PAs ongoing commitment to the nascent upstream lighting initiative as well as plans for expansion of the upstream model to the HVAC market.
- Discussion of and commitment to moving forward on an LED street lighting initiative.
- The PAs have done good work developing a fairly comprehensive plan for addressing codes and standards in the next plan period. (Unfortunately, the PAs chose not to include all of the information on the codes and standards plan in their April 30 draft plan version – more is coming.)





Positives: Residential and Low Income Programs

- Early retirement of heating equipment incentives
- Pre-weatherization barrier offer
- Suite of prescriptive deeper savings or lost opportunity measures
- Emphasis on Community Engagement (e.g. Community-based Outreach)
- Continued effective screening, field testing and incorporation of new measures and technologies (Low Income)
- Exploration of “fuel blind” service to low-income multifamily customers (Low Income)



Key Concerns and Shortcomings

- Plan does not include the *necessary information and level of detail* for review and analysis – for savings, benefits, costs, Council priorities, and programs
 - Reasonable question whether a short form of a Plan would ever be adequate
- Four key *substantive concerns* with the Plan as submitted:
 - Electric savings goals are approaching consultant-recommended targets but are not quite there (yet)
 - Gas savings goals are too low
 - PA-proposed costs are too high and are not justified
 - The priorities of the EEAC, adopted in February 2012, are not adequately addressed in a clear, complete, and tangible manner in the Plan.



Savings Goals

Annual Energy Savings, 2013-2015						
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015
Electric (MWh)	619,638	814,160	1,096,132	1,172,093	1,195,294	1,207,036
Electric (% of Sales)	1.30%	1.72%	2.32%	2.45%	2.47%	2.47%
Gas (Therms)	11,245,670	15,353,053	23,586,965	22,036,058	23,419,867	23,725,347
Gas (% of Sales)	0.56%	0.73%	1.10%	1.02%	1.09%	1.10%

- The PA-proposed electric and gas savings fall short of achieving all cost-effective energy efficiency as estimated in the Consultant Team’s potential assessment report.
- While the PA electric goals approach about 2.5% overall, the savings are slightly less than that level in all years. Furthermore, it appears, based on the numbers from some individual PAs, that the statewide savings could be higher than 2.5% in 2014 and 2015.
- The PAs propose statewide gas savings goals in 2013 (1.02%) that are lower than the 2012 MTM goals (1.10%) and significantly lower than the Consultant Team’s recommendations.
- Oil savings goals are not included in the Initial Draft Plan.



Electric Savings Goals

Electric Annual Savings as % Sales (Annual % Savings Goals)						
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015
Consultant Recommendation				2.50%	2.60%	2.70%
PA-Proposed Statewide	1.30%	1.72%	2.32%	2.45%	2.47%	2.47%
NGRID	1.36%	1.69%	2.41%	2.48%	2.51%	2.50%
NSTAR	1.34%	1.79%	2.37%	2.50%	2.50%	2.50%
WMECo	1.12%	1.47%	2.18%	2.50%	2.50%	2.50%
CLC	0.76%	1.28%	1.17%	1.82%	1.77%	1.80%
Unitil	0.61%	4.18%	2.18%	1.69%	1.69%	1.69%





Example: Savings Goals For C&I Electric Sector

C&I Electric Annual Savings as Percentage of Retail Sales					
	2011 Achieved Savings (PYE)	2012 MTM Savings	2013	2014	2015
Consultant Recommendation			3.0%	3.1%	3.3%
PA 4/30 Plan Statewide	1.80%	2.59%	2.81%	2.79%	2.79%
NGrid	1.69%	2.61%	2.92%	2.89%	2.90%
NSTAR	1.88%	2.71%	2.75%	2.74%	2.74%
WMECo	1.63%	2.41%	2.79%	2.79%	2.81%
CLC	1.12%	0.99%	2.47%	2.10%	2.05%
Unitil	6.28%	3.12%	2.40%	2.40%	2.41%

Key question about “high performers” -- if one PA can reach a high level of performance, why can’t all or most PAs?





Gas Savings Goals

Gas Annual Savings as % Sales (Annual % Savings Goals)						
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015
Consultant Recommendation				1.30%	1.50%	1.70%
PA-Proposed Statewide	0.56%	0.73%	1.10%	1.02%	1.09%	1.10%
NGRID	0.54%	0.77%	1.21%	1.06%	1.16%	1.15%
NSTAR	0.51%	0.71%	1.05%	1.10%	1.12%	1.15%
CMA	0.72%	0.70%	0.92%	1.00%	1.03%	1.05%
NGEC	0.27%	0.55%	0.71%	0.51%	0.52%	0.53%
Berkshire	0.50%	0.49%	0.82%	0.51%	0.52%	0.55%
Unitil	0.81%	0.66%	0.63%	0.63%	0.63%	0.63%



PA-Proposed Costs

PA Costs				
	2012 MTM	2013	2014	2015
Electric	\$ 490,005,649	\$ 505,960,614	\$ 506,528,458	\$ 514,839,688
Gas	\$ 131,544,816	\$ 171,338,077	\$ 173,918,453	\$ 175,756,825
Total	\$ 621,550,465	\$ 677,298,691	\$ 680,446,910	\$ 690,596,513

- The PA-proposed costs are too high and are not justified, particularly when considering the level of PA-proposed savings.
- For example, the PAs propose statewide gas goals for 2013 that are 7% lower than 2012 MTM goals, yet propose 2013 statewide budgets that are almost \$40 million (30%) higher than 2012.
- The electric and gas costs are much higher than recent actual costs per unit savings achieved in the field.
- See the additional details on PA costs and cost per unit savings in the EEAC Consultant report.

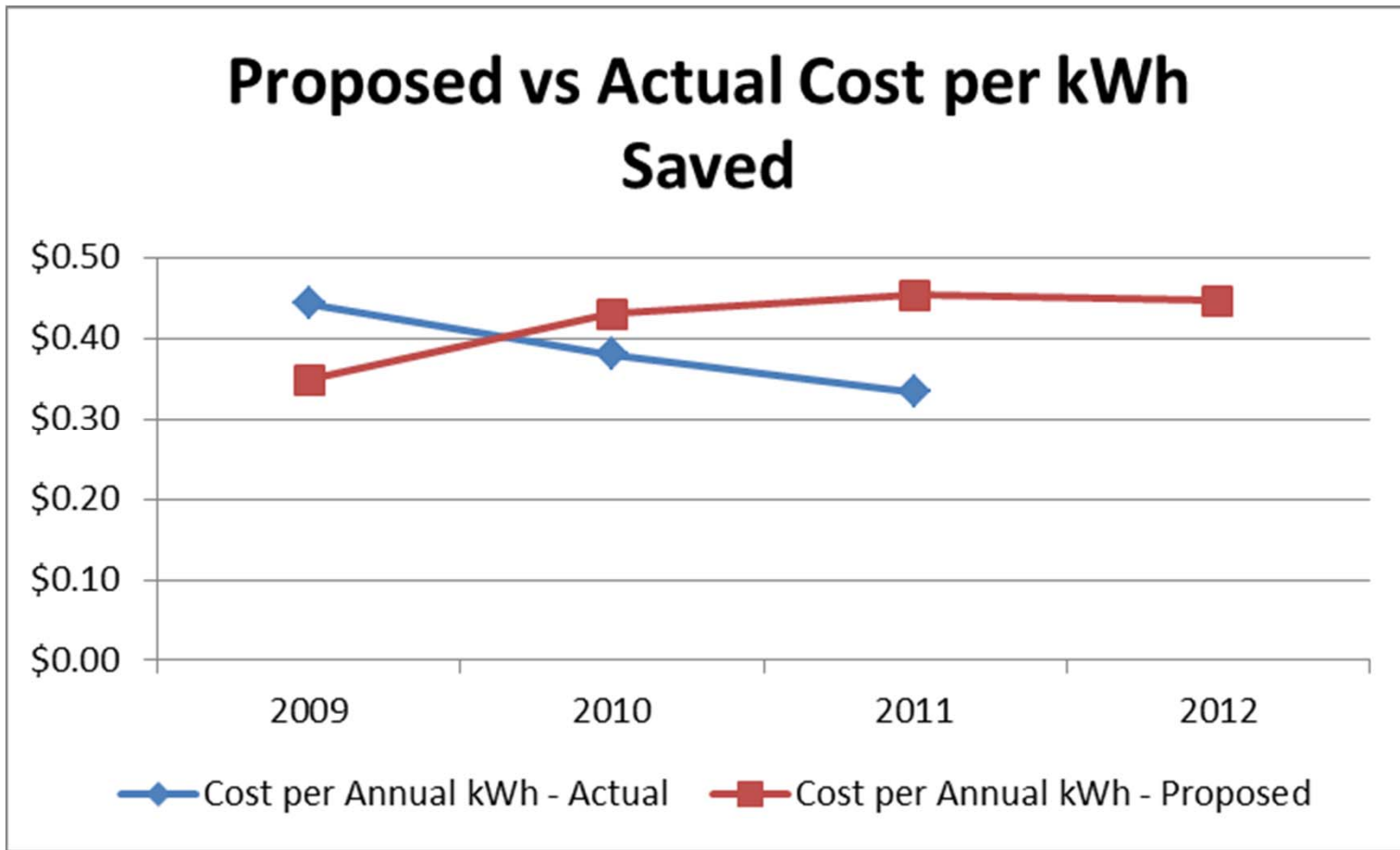


Cost of Saved Energy - Electric

Total Cost for Saved Energy - Electric (million \$)						
	2010	2011	2012	2013	2014	2015
Proposed Savings Targets				2.5%	2.6%	2.7%
Proposed Savings (GWh)				1,185	1,232	1,280
Statewide Portfolio - Past Performance	\$236	\$275		\$423	\$440	\$457
\$/kWh (annual)	\$0.38	\$0.33		\$0.36	\$0.36	\$0.36
\$/kWh (lifetime)	\$0.032	\$0.026				
MTM Plan	\$279	\$453	\$551	\$592	\$616	\$640
\$/kWh (annual)	\$0.447	\$0.454	\$0.447	\$0.50	\$0.50	\$0.50
\$/kWh (lifetime)	\$0.038	\$0.039	\$0.041			
Point380 Report			\$383	\$572	\$595	\$618
\$/kWh (annual)			\$0.48	\$0.48	\$0.48	\$0.48
\$/kWh (lifetime)			\$0.042			

Note the different points of comparison: PAs tend to compare to 2012 MTM (plan data) while the Consultants compare more to past actual data (2010 Report and 2011 Preliminary Year-End).

Cost of Saved Energy - Electric



Electric Costs

Electric PA Cost/Lifetime kWh Saved						
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015
Statewide	\$ 0.032	\$ 0.026	\$ 0.041	\$ 0.037	\$ 0.036	\$ 0.037
NGRID	\$ 0.032	\$ 0.028	\$ 0.043	\$ 0.036	\$ 0.036	\$ 0.036
NSTAR	\$ 0.028	\$ 0.023	\$ 0.038	\$ 0.035	\$ 0.035	\$ 0.035
WMECo	\$ 0.039	\$ 0.032	\$ 0.036	\$ 0.038	\$ 0.038	\$ 0.038
CLC	\$ 0.082	\$ 0.049	\$ 0.073	\$ 0.074	\$ 0.064	\$ 0.065
Unitil	\$ 0.060	\$ 0.009	\$ 0.049	\$ 0.051	\$ 0.051	\$ 0.052



Example: PA Costs For C&I Electric Sector

C&I Electric Yield (PA Costs (\$)/lifetime kWh saved)					
	2011 Achieved Savings (PYE)	2012 MTM Savings	2013	2014	2015
PA 4/30 Plan Statewide	\$ 0.016	\$ 0.029	\$ 0.027	\$ 0.027	\$ 0.027
Grid	\$ 0.017	\$ 0.030	\$ 0.028	\$ 0.028	\$ 0.028
NSTAR	\$ 0.015	\$ 0.029	\$ 0.025	\$ 0.025	\$ 0.025
WMECo	\$ 0.022	\$ 0.026	\$ 0.028	\$ 0.028	\$ 0.028
CLC	\$ 0.021	\$ 0.038	\$ 0.056	\$ 0.039	\$ 0.040
Unitil	\$ 0.005	\$ 0.037	\$ 0.034	\$ 0.035	\$ 0.036

Key question about “high performers” -- if one PA can reach a high level of performance, why can’t all or most PAs?



\$ of PA Cost/Lifetime kWh Saved						
	2010	2011	2012	2013	2014	2015
Statewide	\$ 0.032	\$ 0.026	\$ 0.041	\$ 0.037	\$ 0.036	\$ 0.037
Res	\$ 0.062	\$ 0.059	\$ 0.081	\$ 0.079	\$ 0.079	\$ 0.079
LI	\$ 0.109	\$ 0.109	\$ 0.174	\$ 0.067	\$ 0.063	\$ 0.065
C&I	\$ 0.022	\$ 0.016	\$ 0.029	\$ 0.027	\$ 0.027	\$ 0.027
NGRID	\$ 0.032	\$ 0.028	\$ 0.043	\$ 0.036	\$ 0.036	\$ 0.036
Res	\$ 0.054	\$ 0.058	\$ 0.079	\$ 0.075	\$ 0.075	\$ 0.075
LI	\$ 0.111	\$ 0.112	\$ 0.159	\$ 0.037	\$ 0.035	\$ 0.035
C&I	\$ 0.022	\$ 0.017	\$ 0.030	\$ 0.028	\$ 0.028	\$ 0.028
NSTAR	\$ 0.028	\$ 0.023	\$ 0.038	\$ 0.035	\$ 0.035	\$ 0.035
Res	\$ 0.070	\$ 0.059	\$ 0.090	\$ 0.086	\$ 0.086	\$ 0.086
LI	\$ 0.093	\$ 0.097	\$ 0.207	\$ 0.212	\$ 0.212	\$ 0.221
C&I	\$ 0.020	\$ 0.015	\$ 0.029	\$ 0.025	\$ 0.025	\$ 0.025
WMECo	\$ 0.039	\$ 0.032	\$ 0.036	\$ 0.038	\$ 0.038	\$ 0.038
Res	\$ 0.061	\$ 0.051	\$ 0.058	\$ 0.062	\$ 0.062	\$ 0.062
LI	\$ 0.156	\$ 0.099	\$ 0.117	\$ 0.118	\$ 0.118	\$ 0.118
C&I	\$ 0.027	\$ 0.022	\$ 0.026	\$ 0.028	\$ 0.028	\$ 0.028
CLC	\$ 0.082	\$ 0.049	\$ 0.073	\$ 0.074	\$ 0.064	\$ 0.065
Res	\$ 0.085	\$ 0.064	\$ 0.084	\$ 0.091	\$ 0.086	\$ 0.084
LI	\$ 0.224	\$ 0.241	\$ 0.243	\$ 0.315	\$ 0.232	\$ 0.233
C&I	\$ 0.064	\$ 0.021	\$ 0.038	\$ 0.056	\$ 0.039	\$ 0.040
Unitil	\$ 0.060	\$ 0.009	\$ 0.049	\$ 0.051	\$ 0.051	\$ 0.052
Res	\$ 0.185	\$ 0.084	\$ 0.093	\$ 0.146	\$ 0.149	\$ 0.151
LI	\$ 0.152	\$ 0.165	\$ 0.324	\$ 0.292	\$ 0.297	\$ 0.303
C&I	\$ 0.036	\$ 0.005	\$ 0.037	\$ 0.034	\$ 0.035	\$ 0.036



Cost of Saved Energy - Gas

Total Cost for Saved Energy - Gas (million \$)						
	2010	2011	2012	2013	2014	2015
Proposed Savings Targets				1.3%	1.5%	1.7%
Proposed Savings (million therms)				29	34	38
Statewide Portfolio - Past Performance	\$62	\$98		\$173	\$200	\$227
\$/therm (annual)	\$5.56	\$6.33		\$5.94	\$5.94	\$5.94
\$/therm (lifetime)	\$0.35	\$0.44				
MTM Plan	\$78	\$116	\$144	\$182	\$210	\$238
\$/therm (annual)	\$5.46	\$6.36	\$6.11	\$6.24	\$6.24	\$6.24
\$/therm (lifetime)	N/A	N/A	N/A			
Point380 Report			\$230	\$135	\$156	\$177
\$/therm (annual)			\$4.63	\$4.63	\$4.63	\$4.63
\$/therm (lifetime)			\$0.25			

Gas Costs

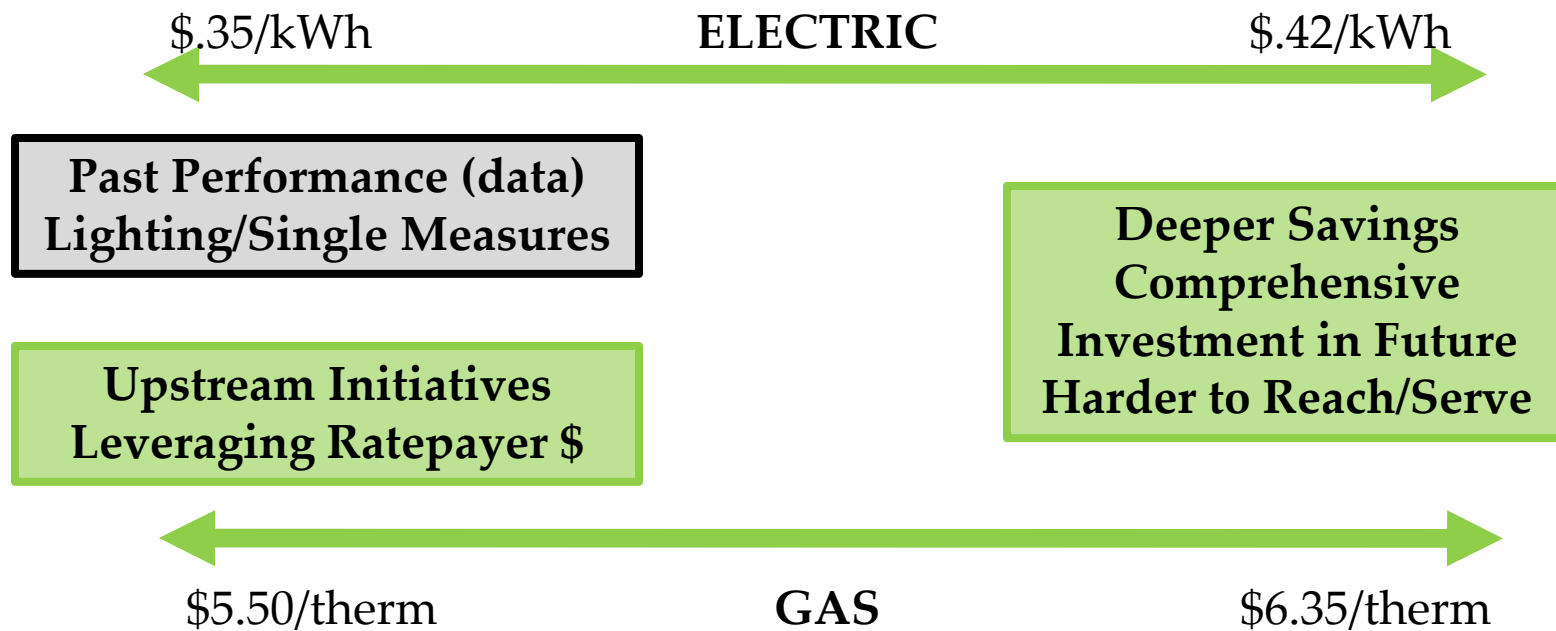
Gas PA Cost/Lifetime Therm Saved						
	2010 Report	2011 Year End	2012 MTM	2013	2014	2015
Statewide	\$ 0.303	\$ 0.431	\$ 0.397	\$ 0.521	\$ 0.516	\$ 0.509
NGRID	\$ 0.299	\$ 0.549	\$ 0.475	\$ 0.642	\$ 0.625	\$ 0.603
NSTAR	\$ 0.318	\$ 0.295	\$ 0.329	\$ 0.480	\$ 0.484	\$ 0.487
CMA	\$ 0.288	\$ 0.334	\$ 0.292	\$ 0.335	\$ 0.350	\$ 0.363
NGEC	\$ 0.607	\$ 0.398	\$ 0.435	\$ 0.443	\$ 0.460	\$ 0.477
Berkshire	\$ 0.308	\$ 0.344	\$ 0.351	\$ 0.394	\$ 0.376	\$ 0.374
Unitil	\$ 0.247	\$ 0.363	\$ 0.380	\$ 0.357	\$ 0.364	\$ 0.371

The PAs propose statewide gas goals for 2013 that are 7% lower than 2012 MTM goals, yet propose 2013 statewide budgets that are almost \$40 million (30%) higher than 2012.



Budget Suggestion for 2013-2015

Initial Thoughts on Cost Ranges



EEAC Consultant initial analysis from April 2012.



Council Priorities

The priorities of the EEAC, adopted in February 2012, are not adequately addressed in a clear, complete, and tangible manner in the Plan. In particular, the Plan does not adequately describe how the EEAC priorities would be addressed in 2013-2015. While the Plan lists the priorities and provides some references to other sections of the document, there is too little information on how the EEAC priorities would be addressed in a tangible way. The key priorities that are not addressed in enough detail, even for a Plan such as this, are areas pertaining to cost efficiency and the aggressiveness of the projected goals. Below, we provide our review of specific priorities and the extent to which the Initial Draft Plan addresses them.

Other Topics/Issues

- EM&V
- Technical Reference Manual (TRM)
- Program descriptions (lots of comments)
- Markets and segments to increase focus on (including hard-to-reach/hard-to-serve)
- Unique circumstances in service territories
 - Work both ways
 - Patterns in Plan are not always as expected
- Marketing, outreach and branding